

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A management mediating device, comprising:

a management system communication unit making a connection to a management system outside a fire wall from inside the fire wall, and receiving a command from the management system;

a storage unit storing a connection schedule of the management system communication unit to make the connection to the management system;

an instructing unit that, in accordance with the connection schedule, instructs the management system communication unit to start a connection operation to make the connection to the management system, wherein after the management system communication unit makes the connection to the management system, the management system receives the command from the management system; and

a processor performing a process in accordance with the received command, the process including to send a test signal to a hardware resource of an image forming apparatus to obtain data indicating a usage state of the image forming apparatus in a local area, the data indicating the usage state including information in response to the test signal from the hardware resource;

[[a]] ~~the management object system communication unit transferring the command to a management object system and for transferring the~~ obtained data to the management system at a time the connection schedule indicates to connect to the management system[[:]]

~~a storage unit storing a connection schedule of the management system communication unit; and~~

~~an instructing unit, in accordance with the connection schedule, instructing the management system communication unit to make a connection to the management system.~~

Claim 2 (Previously Presented): The management mediating device according to claim 1, wherein in accordance with the connection schedule, the instructing unit provides to the management system communication unit at least one of:

- 1) an instruction of making a connection to the management system at a specified date and time;
- 2) an instruction of making a connection to the management system at a specified time every day;
- 3) an instruction of making a connection to the management system at a specified date and time every month;
- 4) an instruction of making a connection to the management system in a specified period at intervals of a specified value;
- 5) an instruction of making a connection to the management system in a specified period at intervals of a specified value every day; and
- 6) an instruction of making a connection to the management system from a specified date and time at intervals of a specified value for an indefinite period.

Claim 3 (Previously Presented): The management mediating device according to claim 1, wherein the connection schedule includes a start date and time, an end date and time, and a value of an interval, and in accordance with the connection schedule, the instructing unit provides to the management system at least one of:

- 1) when only the start date and time is specified, an instruction of making a connection to the management system at the specified start date and time;
- 2) when only a start time of the start date and time is specified, an instruction of making a connection to the management system at the start time every day;

3) when only the start date and time is specified, and a month of the start date and time is not specified, an instruction of making a connection to the management system at the start date and time every month;

4) when all of the start date and time, the end date and time, and the value of the interval are specified, an instruction of making a connection to the management system from the start date and time to the end date and time at intervals of the value;

5) when all of the start date and time, the end date and time, and the value of the interval are specified, and only the start time and the end time of the start date and time and the end date and time are specified, an instruction of making a connection to the management system from the start time to the end time at intervals of the value every day; and

6) when the start date and time and the value of the interval are specified, and the end date and time is not specified, an instruction of making a connection to the management system from the start date and time for an indefinite period.

Claim 4 (Previously Presented): The management mediating device according to claim 1, wherein the processor has a schedule changing function of changing the connection schedule stored in the storage unit in accordance with the command.

Claim 5 (Previously Presented): The management mediating device according to claim 4, wherein when the command includes a schedule adding command, the processor adds an additional connection schedule to the connection schedule stored in the storage unit, the additional connection schedule being attached to the schedule adding command.

Claim 6 (Previously Presented): The management mediating device according to claim 4, wherein the connection schedule is constituted by a plurality of unit schedules, and an identifier is attached to each unit schedule,

when the command includes a schedule deleting command, the processor searches the storage unit to find the unit schedule corresponding to the identifier attached to the schedule deleting command, and deletes the found unit schedule.

Claim 7 (Previously Presented): The management mediating device according to claim 4, wherein the command includes an all schedule changing command, the processor extracts an Internet address attached to the all schedule changing command, causes the management system communication unit to obtain a new connection schedule existing at the Internet address, and replaces the connection schedule stored in the storage unit with the new connection schedule.

Claim 8 (Previously Presented): The management mediating device according to claim 4, wherein when the command includes a schedule requiring command, the processor reads the connection schedule from the storing means, and causes the management system communication unit to provide the connection schedule to the management system.

Claim 9 (Previously Presented): The management mediating device according to claim 1, wherein the management system communication unit has a SOAP processing function of making communication with the management system based on SOAP.

Claim 10 (Canceled).

Claim 11 (Currently Amended): A computer readable storing medium that stores a management mediating program that is used at a management mediating device, wherein the management mediating device includes a first communication unit, a processor, a second communication unit, a storage unit that stores a connection schedule for the management mediating device to make a connection to a management system, and an instructing unit, the management mediating program comprising:

a first communication program code ~~of causing~~ that causes the first communication unit to make ~~[[a]]~~ the connection to ~~[[a]]~~ the management system via the Internet, and to receive a command from the management system, wherein the management mediating device is positioned at an inside of a fire wall, and the management system is positioned at an outside of the fire wall;

an instructing program code that, in accordance with the connection schedule, instructs the management system communication unit to start a connection operation to make the connection to the management system, wherein after the management system communication unit makes the connection to the management system, the management system receives the command from the management system;

a processing program code ~~of causing~~ that causes the processor to perform a process in accordance with the command, the process including to send a test signal to a hardware resource of an image forming apparatus to obtain data indicating a usage state of the image forming apparatus in a local area, the data indicating the usage state including information in response to the test signal from the hardware resource; and

a second communication program code ~~of causing~~ that causes the second communication unit to transfer ~~the command to a management object system and to transfer the obtained~~ data to the management system at a time the connection schedule indicates to connect to the management system; ~~and~~

~~an instructing program code of, in accordance with the connection schedule, causing the instructing unit to provide to the first communication an instruction of making a connection to the management system.~~

Claim 12 (Currently Amended): An image processing apparatus that comprises a hardware resource including at least one of a displaying unit, a printing unit, a scanner unit, a facsimile unit, a hard disk, an imaging unit and a network interface, and provides a service including at least one of a printing service, a copying service, and a facsimile service,

the image processing apparatus further comprising:

at least one application that performs a particular process for the service;

a management system communication unit making a connection to a management system from an inside of a fire wall, and receiving a command from the management system positioned at an outside of the fire wall, and to transmit data to the management system;

a storage unit storing a connection schedule of the management system communication unit to make the connection to the management system;

an instructing unit that, in accordance with the connection schedule, instructs the management system communication unit to start a connection operation to make the connection to the management system, wherein after the management system communication unit makes the connection to the management system, the management system receives the command from the management system;

a processor performing a process in accordance with the command, the process including to send a test signal to the hardware resource of the image processing apparatus to obtain data indicating a usage state of an image forming apparatus in a local area, the data indicating the usage state including information in response to the test signal from the hardware resource;

the management system communication unit transferring the obtained data to the management system at a time the connection schedule indicates to connect to the management system

~~a storage unit storing a connection schedule of the management system communication unit; and~~

~~an instructing unit, in accordance with the connection schedule, instructing the management system communication unit to make a connection to the management system.~~

Claim 13 (Previously Presented): The image processing apparatus according to claim 12, wherein in accordance with the connection schedule, the instructing unit provides to the management system communication unit at least one of:

- 1) an instruction of making a connection to the management system at a specified date and time;
- 2) an instruction of making a connection to the management system at a specified time every day;
- 3) an instruction of making a connection to the management system at a specified date and time every month;
- 4) an instruction of making a connection to the management system in a specified period at intervals of a specified value;
- 5) an instruction of making a connection to the management system in a specified period at intervals of a specified value every day; and
- 6) an instruction of making a connection to the management system at a specified date and time at intervals of a specified value for an indefinite period.

Claim 14 (Previously Presented): The image processing apparatus according to claim 12, wherein the connection schedule includes a start date and time, an end date and time, and a value of an interval, and in accordance with the connection schedule, the instructing unit provides to the management system at least one of:

- 1) when only the start date and time is specified, an instruction of making a connection to the management system at the specified start date and time;
- 2) when only a start time of the start date and time is specified, an instruction of making a connection to the management system at the start time every day;
- 3) when only the start date and time is specified, and a month of the start date and time is not specified, an instruction of making a connection to the management system at the start date and time every month;
- 4) when all of the start date and time, the end date and time, and the value of the interval are specified, an instruction of making a connection to the management system from the start date and time to the end date and time at intervals of the value;
- 5) when all of the start date and time, the end date and time, and the value of the interval are specified, and only the start time and the end time of the start date and time and the end date and time are specified, an instruction of making a connection to the management system from the start time to the end time at intervals of the value every day; and
- 6) when the start date and time and the value of the interval are specified, and the end date and time is not specified, an instruction of making a connection to the management system from the start date and time for an indefinite period.

Claim 15 (Previously Presented): The image processing apparatus according to claim 12, wherein the processor has a schedule changing function of changing the connection schedule stored in the storage unit in accordance with the command.



Claim 16 (Previously Presented): The image processing apparatus according to claim 15, wherein when the command includes a schedule adding command, the processor adds an additional connection schedule to the connection schedule stored in the storage unit, the additional connection schedule being attached to the schedule adding command.

Claim 17 (Previously Presented): The image processing apparatus according to claim 15, wherein the connection schedule is constituted by a plurality of unit schedules, and an identifier is attached to each of the unit schedule,

when the command includes a schedule deleting command, the processor searches the storage unit to find the unit schedule corresponding to the identifier attached to the schedule deleting command, and deletes the found unit schedule.

Claim 18 (Previously Presented): The image processing apparatus according to claim 15, wherein the command includes an all schedule changing command, the processor extracts an Internet address attached to the all schedule changing command, causes the management system communication unit to obtain a new connection schedule existing at the Internet address, and replaces the connection schedule stored in the storage unit with the new connection schedule.

Claim 19 (Previously Presented): The image processing apparatus according to claim 15, wherein when the command includes a schedule requiring command, the processor reads the connection schedule from the storing means, and causes the management system communication unit to provide the connection schedule to the management system.

Claim 20 (Previously Presented): The image processing apparatus according to claim 12, wherein the management system communication unit has a SOAP processing function of making communication with the management system based on SOAP.

Claims 21-22 (Canceled).

Claim 23 (Currently Amended): A remote management system in which a management object system is managed by communication between a management system and a management mediating device,

wherein the management mediating device comprises:

a management system communication unit making a connection to the management system outside a fire wall from inside the fire wall, and receiving a command from the management system;

a storage unit storing a connection schedule of the management system communication unit to make the connection to the management system;

an instructing unit that, in accordance with the connection schedule, instructs the management system communication unit to start a connection operation to make the connection to the management system, wherein after the management system communication unit makes the connection to the management system, the management system receives the command from the management system; and

a processor performing a process in accordance with the received command, the process including to send a test signal to a hardware resource of an image forming apparatus to obtain data indicating a usage state of the image forming apparatus in a local area, the data indicating the usage state including information in response to the test signal from the hardware resource;

~~[[a]] the management object system communication unit transferring the command to a management object system and for transferring the obtained data to the management system at a time the connection schedule indicates to connect to the management system;~~

~~a storage unit storing a connection schedule of the management system communication unit; and~~

~~an instructing unit, in accordance with the connection schedule, instructing the management system communication means to make a connection to the management system;~~

and wherein the processor changes the connection schedule stored in the storage unit in accordance with a schedule changing command received from the management system.

Claim 24 (Currently Amended): A remote management method of managing a management object system by communication between a management mediating device and a management system, the method comprising:

a) the management mediating device making a connection, via the Internet, from inside a fire wall to the management system outside the fire wall, the connection being made based on a stored connection schedule in the management mediating device;

b) after the management mediating device makes the connection to the management system, receiving a command from the management system by using the connection;

c) performing a process in accordance with the command to send a test signal to a hardware resource of an image forming apparatus to obtain data indicating a usage state of the image forming apparatus in a local area, the data indicating the usage state including information in response to the test signal from the hardware resource;

d) ~~transferring the command to a management object system and transferring the obtained data to the management system at a time the connection schedule indicates to connect to the management system; and~~

~~e) storing a connection schedule;~~

~~f) providing an instruction so that at the step a), the connection is made in accordance with the connection schedule; and~~

[[g]] e) when the command is a schedule changing command, changing the stored connection schedule in accordance with the schedule changing command.

Claim 25 (New): A management mediating device comprising:

a communication unit configured to connect to an external management system via the Internet from inside of a firewall;

a storing unit configured to store a connection schedule for the communication unit to connect to the management system;

a connection instructing unit configured to provide instructions to the communication unit to connect to the management system according to the connection schedule; and

a schedule changing unit configured to receive a command as a response to the connection to the management system made from the communication unit to the management system, and to change the connection schedule of the storing unit according to the received command; wherein:

said schedule changing unit adds, to the connection schedule of the storing unit, a connection schedule attached to a schedule adding command when the received command is a schedule adding command, and

when the received command is an all schedule changing command, the schedule changing unit downloads a new connection schedule stored at an Internet address attached to the all schedule changing command, by the communication unit, and replaces the connection schedule of the storing unit by the downloaded new connection schedule.